Health Disparities: Challenge and Opportunity

Office of Research on Minority Health

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National Institutes of Health
U.S. Department of Health
and Human Services

NIH Minority Research and Research Training Mandate

The Office of Research on Minority Health (ORMH) at the National Institutes of Health (NIH) is responsible for stimulating new research ideas for improving the health status of minority Americans across the lifespan and in promoting programs aimed at expanding the participation of underrepresented minorities in all aspects of biomedical and behavioral research.

Closing the Gap in Health Disparities

Why do African-American, American Indian/ Alaska Native, Asian and Pacific Islander, and Hispanic citizens suffer poorer health and higher rates of premature death than the majority population? How do psychosocial factors such as environmental stress, depression, and existing social supports interact with physiological risk factors to determine health?

These are questions scientists attempt to answer as they seek to find out why minorities are burdened disproportionately by cardiovascular disease, lupus, diabetes, HIV/AIDS, end-stage renal disease, and certain cancers. Increasingly research holds the promise of uncovering new scientific knowledge that will improve the health of all Americans.

Health Disparities: Challenge and Opportunity looks at the important role research plays in improving the health of minority Americans. Research helps doctors effectively diagnose and treat patients and prevent health problems. For example, recent studies suggest that major compli-cations from diabetes can be controlled through proper diet, exercise, and strict control of blood sugar levels.

The NIH Office of Research on Minority Health was created, with the encouragement of Congress, by the Director, NIH, in 1990. It was established in the Office of the Director, NIH, in 1993 when Congress enacted the National Institutes of Health Revitalization Act of 1993, Public Law 103-43.

To accomplish its mission of improving the health status of minority Americans and expanding the participation of underrepresented minorities in biomedical and behavioral research, ORMH collaborates with Institutes and Centers (ICs) at NIH and with other Federal agencies and outside organizations.

Priorities for the Millennium

The field of minority health and training addresses a broad range of issues. Areas designated as priorities have been determined by Congress, the ORMH Advisory Committee, representatives of the minority populations served, medical experts in the scientific community, and our partners. ORMH focuses attention on:

- Identifying and supporting research opportunities to close the gap in health status for underserved populations in the United States and abroad.
- Promoting the inclusion of minorities in research studies.
- Enhancing the capacity of the minority community to address its health problems.
- Increasing collaborative research and research training between minority and majority institutions.
- Improving the competitiveness and increasing the numbers of well-trained minority scientists applying for NIH funding.

The Minority Health Initiative

The Minority Health Initiative (MHI), a multi-year biomedical and behavioral research and research training program, co-funds through its partnerships:

- Interventions to improve prenatal health and reduce infant mortality.
- Studies of childhood and adolescent lead poisoning; HIV infection and AIDS; and alcohol and drug use.
- Research in adult populations focused on cancer, diabetes, obesity, hypertension, cardiovascular diseases, mental disorders, asthma, visual impairments, and alcohol abuse.
- Training for faculty and for students at all stages of the educational pipeline — from precollege and undergraduate through graduate and postdoctoral levels.

The Promise of Research

The translation of laboratory, clinical, and epidemiological discoveries into clinical practice holds the hope for improved public health. Since its establishment over 10 years ago, ORMH and its partners have initiated many collaborations. The following represent a sampling of areas of special emphasis.

Infant Mortality

The relationship between low birth weight and neonatal mortality has been well established. Other risk factors include: social, economic, and demographic factors (maternal age under 17 or over 34,

unmarried status, poverty); inadequate parental education and prenatal care; poor nutrition; behavioral factors (smoking and drug and alcohol use during pregnancy); sexually transmitted infections; psychosocial stress; and lack of social support.

ORMH and the National Institute of Child Health and Human Development (NICHD) support an interdisciplinary effort – *The Cooperative Community-Based Perinatal Studies and Interventions in Minority Populations in the District of Columbia* – to reduce low birth weight and infant mortality.

Diabetes

Research suggests that the major complications from diabetes such as end-stage renal disease, amputations, and visual impairment may be delayed or prevented through strict control of blood sugar levels, proper diet, and regular physical activity.

The Diabetes Prevention Program, a national multicenter clinical trial sponsored by ORMH and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), will determine if Type 2 diabetes can be delayed or prevented in patients at high risk for developing the disease. Because Type 2 diabetes disproportionately affects minority populations, 45 percent of the patients enrolled are from these populations.

The National Diabetes Education Program, co-funded by ORMH and NIDDK, will provide a framework for national, state, and community involvement in reducing the burden of diabetes through public education outreach, especially to minority populations.

Asthma

Environmental exposures to indoor allergens and respiratory irritants, genetic inheritance, access to appropriate medical care, cultural health beliefs, and socioeconomic status contribute to the rate and severity of asthma in different ethnic groups. Current research is seeking ways to decrease the frequency and severity of the disease.

ORMH and the National Institute of Allergy and Infectious Diseases (NIAID) are looking at ways to reduce asthma morbidity in minority populations in two studies, *Reducing Asthma Morbidity Among Native Americans of the Southwest and Northwest U.S. and Allergen Avoidance in Inner City Asthmatics*.

In the *Strong Heart Study*, ORMH and the National Heart, Lung, and Blood Institute (NHLBI) are examining the prevalence and risk factors for asthma among Native Americans.

Asthma occurs at a higher rate in some Hispanics, especially in those of Puerto Rican origin. In conjunction with NHLBI, ORMH is initiating a study comparing the occurrence of asthma in Puerto Rican children in New York City schools with its occurrence in school children on the Island.

Cardiovascular Disease

Heart disease continues to be the leading cause of death in the United States in the Native American and Alaska Native, Hispanic, African-American, Asian, Pacific Islander American, and White populations.

ORMH and its partner, NHLBI, collaborate in studies designed to assess how heart disease affects and can be controlled in special populations.

The *Jackson Heart Study* investigates the physiological, environmental, social, and genetic factors related to cardiovascular disease and the high rates of complications from hypertension in African Americans, including stroke, renovascular disease, and congestive heart failure.

Educating the public about research findings and healthy lifestyles is an important goal of the ORMH/NHLBI partnership. Salud Para Su Corazón, a Latino community cardiovascular disease prevention and outreach initiative, encourages the creation of alliances to promote heart health. A variety of culturally appropriate materials, guides, videotapes, mass media products, and other resources are available to bring heart health education to the Latino community.

Sleep Apnea

Evidence indicates that the prevalence of sleep apnea in young African Americans is almost twice that of Whites of the same age group. ORMH and NHLBI are examining the epidemiologic and genetic factors contributing to the disproportionate prevalence of sleep apnea in this population.

Aging

Hispanics represent one of the most rapidly growing ethnic populations in the United States. The health needs of the Hispanic elderly population are a growing concern. At present, very little research on aging in this population exists.

ORMH and the National Institute on Aging (NIA) are conducting research to examine the prevalence, incidence, and etiology of cognitive and physical impairments and dementia in elderly Hispanics. The study, *Epidemiology of Functional Status in Elderly Hispanics*, will include a sizeable Hispanic patient population and will have far-reaching impact on Hispanic health status.

ORMH and NIA are also addressing important questions of minority aging in the Study of Women's Health Across the Nation (SWAN). A total of 3,150 diverse White, African-American, Chinese, Japanese, and Hispanic women are helping to answer questions about ethnic and racial differences in mid-life transitions.

Age-related changes in the responsiveness of skeletal muscle to testosterone are unknown. ORMH and NIA are investigating this issue in a study, *Sarcopenia: Testosterone Dose Response in Older Men*. African-American and Hispanic older men will constitute the majority of the patient population. It is hoped the study will elucidate the potential ethnic differences in the anabolic effects of testosterone in these populations and provide insight into testosterone replacement therapies in older men.

Lupus

Lupus erythematosus is a unique, complex autoimmune disease having a variety of genetic, environmental, and hormonal factors. It occurs more often in African-American and Hispanic women than in White women.

Lupus is an elusive condition that affects individuals differently and follows no

predictable course. As a result, the care of patients with lupus erythematosus is a challenge that draws on all the resources, knowledge, and strengths of the health care team.

ORMH and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) have recently made available to health care professionals a publication, *Lupus: A Patient Care Guide for Nurses and Other Health Professionals*. It provides an overview of the disease and the elements involved in caring for patients having lupus.

Alcohol and Fetal Injury

Fetal Alcohol Syndrome (FAS) is the most preventable cause of mental retardation. It is characterized by pre- and postnatal growth deficits, morphological anomalies, and cognitive and behavioral dysfunction. FAS occurs disproportionately in minority populations, particularly in Native Americans and African Americans.

In partnership with the National Institute of Alcohol Abuse and Alcoholism (NIAAA), and with clinicians and scientists from Howard University, Drew University, the University of New Mexico, and Indiana University, ORMH is studying metabolic, genetic, and environmental risk factors; developmental impairments; and potential ameliorative measures in Native Americans from the Plains Culture, in urban African Americans, and in African heritage women in the Western Cape of South Africa, an area with the highest rate of FAS in the world.

Cancer

ORMH and the National Cancer Institute (NCI) jointly sponsor programs that

encourage minority participation in clinical trials, provide information about cancer prevention and treatment to diverse populations, and study genetic predictors of disease in special populations. It is hoped that the identification of genetic predictors will lead to early diagnosis and more effective interventions.

Breast Cancer

Breast cancer is the most common cancer among women in the United States. Only limited data on biologic predictors of disease risk among African-American women are currently available. In collaboration with ORMH, NCI has undertaken a study of the genetic predictors of disease risk in this population. The study has recruited more than 50,000 geographically diverse African- American women for whom baseline risk information has already been collected.

Lung Cancer

Lung cancer is a leading cause of cancer-related deaths in African Americans and White Americans. With ORMH sponsorship, NCI is conducting a lung cancer case-controlled study to determine genetic predictors of lung cancer risk in special populations.

Prostate Cancer

African-American and Puerto Rican men suffer disproportionately from prostate cancer. The relationship between benign prostate hyperplasia (BPH) and prostate cancer is unclear. Developing an understanding will be important to minority health. ORMH and NIDDK are actively investigating the link between BPH and prostate cancer to gain further insight into the disease.

In collaboration with Howard University, ORMH, NCI, and the National Human Genome Research Institute are studying the genetics and epidemiology of prostate cancer in African Americans. This team has established the presence of a gene common to some prostate families on chromosome 1.

Gastric Cancer

Chronic infection with *Helicobacter pylori* can lead to gastric and duodenal ulcer disease, chronic gastritis, and gastric malignancy. The elimination of this organism has lead to long-term remission in peptic ulcer disease.

ORMH and NIDDK are conducting a study having special emphasis on minority populations to examine *Helicobacter pylori* and its relationship to digestive diseases and cancer.

General Clinical Research Center

Hypertension, kidney disease, diabetes, asthma, and sickle cell disease are the focus of investigation at the General Clinical Research Center at the Howard University College of Medicine. This center was established by the National Center for Research Resources with support from ORMH.

Career Development and Enhancement

By the year 2000, eighty-five percent of all new participants in the Nation's workforce will be minorities and women. However, these individuals remain underrepresented in the fields of biomedical and behavioral research.

Supplements to Existing NIH Programs

ORMH provides supplemental support to the many established NIH training and research support programs designed to increase the numbers of minority scientists – the *Minority Access to Research Careers (MARC), the Minority Biomedical Research Support Program (MBRS), the Research Centers in Minority Institutions Program (RCMI), and the Research Supplements for Minority Investigators.*

Precollege Interventions

ORMH co-sponsors with the National Science Foundation (NSF) several programs to enrich high school science programs.

The *Comprehensive Partnerships for Mathematics and Science Achievement (CPMSA) Program* provides a standards-based science education program to urban school systems. It is designed to enhance students' capacity to achieve, think critically, and problem-solve in preparation for careers in science, engineering, and technology.

The *Center for Excellence in Research, Teaching, and Learning (CERTL)* Program broadens the knowledge of high school science teachers and provides research opportunities for students and teachers at local colleges and universities.

Undergraduate and Postgraduate Education

The Bridges to the Future Program, an initiative of ORMH and the National Institute of General Medical Sciences, helps students transition from the Associates to the Baccalaureate degree and from the Masters to the Doctoral degree.

Tuberculosis Education

With NHLBI, ORMH has extended the Tuberculosis (TB) Academic Awards program to minority medical schools. This program develops collaborations between majority and minority schools leading to new curricular changes that address the ethnic, cultural, and socioeconomic dimensions of TB in TB education programs at minority institutions.

International Training

ORMH has joined with the Fogarty International Center to develop the *Minority International Research Training Program* that awards grants to support international research and research training of minority undergraduate and graduate students and minority faculty.

Technical Assistance Workshops

To inform minority investigators about NIH's grant mechanisms and peer review process and to enhance their grant writing skills, ORMH and its partners sponsor annual workshops.

Research Infrastructure Enhancement in Minority Institutions

ORMH and the National Center for Research Resources establish institutional partnerships that will enhance the biomedical research infrastructure in eligible minority institutions through the *Research Infrastructure in Minority Institutions (RIMI) Program*.

Additional Information:

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